

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 in its capacity as elected Office

Date of mailing (day/month/year) 08 March 2001 (08.03.01)	
International application No. PCT/EP00/05800	Applicant's or agent's file reference ICT-07903-WO
International filing date (day/month/year) 23 June 2000 (23.06.00)	Priority date (day/month/year) 23 June 1999 (23.06.99)
Applicant FEUERBAUM, Hans-Peter et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

17 January 2001 (17.01.01)

☐ in a notice effecting later election filed with the International Bureau on:

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2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No.: (41-22) 740.14.35	Authorized officer  Claudio Borton  Telephone No.: (41-22) 338.83.38
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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>ICT -07903-W0</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 00/ 05800</b>	International filing date (day/month/year) <b>23/06/2000</b>	(Earliest) Priority Date (day/month/year) <b>23/06/1999</b>
Applicant  <b>ICT INTEGRATED CIRCUIT TESTING GESELLSCHAFT ...</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1

☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

P 00/05800

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01J37/244 H01J37/28

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, PAJ, EPO-Internal, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 42 16 730 A (INTEGRATED CIRCUIT TESTING) 25 November 1993 (1993-11-25) cited in the application  column 5, line 5 - line 33; figures 7,8 ---	1, 2, 4, 6-8, 14-16, 19-22, 24, 25
A	WO 86 07188 A (TURNER DAVID WARREN) 4 December 1986 (1986-12-04) abstract; figures 1, 2 ---	1, 4, 5, 11-13, 18
A	PATENT ABSTRACTS OF JAPAN vol. 008, no. 029 (E-226), 7 February 1984 (1984-02-07) & JP 58 189950 A (HITACHI SEISAKUSHO KK; OTHERS: 01), 5 November 1983 (1983-11-05) abstract -----	1, 14, 19, 20

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

5 October 2000

Date of mailing of the international search report

13/10/2000

Name and mailing address of the ISA

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Authorized officer

Schaub, G

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP 00/05800

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 4216730	A	25-11-1993	US 5422486 A	06-06-1995
WO 8607188	A	04-12-1986	EP 0262129 A	06-04-1988
			GB 2201832 A, B	07-09-1988
			JP 4018421 B	27-03-1992
			JP 62503062 T	03-12-1987
			US 4810883 A	07-03-1989
JP 58189950	A	05-11-1983	NONE	

# INTERNATIONAL SEARCH REPORT

Int. Application No.  
PCT/EP 00/05800

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H01J37/244 H01J37/28

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, PAJ, EPO-Internal, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 42 16 730 A (INTEGRATED CIRCUIT TESTING) 25 November 1993 (1993-11-25) cited in the application  column 5, line 5 - line 33; figures 7,8	1,2,4, 6-8, 14-16, 19-22, 24,25
A	WO 86 07188 A (TURNER DAVID WARREN) 4 December 1986 (1986-12-04) abstract; figures 1,2	1,4,5, 11-13,18
A	PATENT ABSTRACTS OF JAPAN vol. 008, no. 029 (E-226), 7 February 1984 (1984-02-07) & JP 58 189950 A (HITACHI SEISAKUSHO KK;OTHERS: 01), 5 November 1983 (1983-11-05) abstract	1,14,19, 20

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

5 October 2000

Date of mailing of the international search report

13/10/2000

Name and mailing address of the ISA

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Authorized officer

Schaub, G

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. No. Application No



PCT/EP 00/05800

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
DE 4216730	A	25-11-1993	US	5422486 A	06-06-1995
WO 8607188	A	04-12-1986	EP	0262129 A	06-04-1988
			GB	2201832 A,B	07-09-1988
			JP	4018421 B	27-03-1992
			JP	62503062 T	03-12-1987
			US	4810883 A	07-03-1989
JP 58189950	A	05-11-1983	NONE		

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

3

Applicant's or agent's file reference ICT -07903-WO		<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP00/05800	International filing date (day/month/year) 23/06/2000	Priority date (day/month/year) 23/06/1999	
International Patent Classification (IPC) or national classification and IPC H01J37/244			
Applicant ICT INTEGRATED CIRCUIT TESTING GESELLSCHAFT .....			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input checked="" type="checkbox"/> Certain defects in the international application</li> <li>VIII <input checked="" type="checkbox"/> Certain observations on the international application</li> </ul>			
Date of submission of the demand  17/01/2001		Date of completion of this report  28.08.2001	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer  Ruiz Perez, S  Telephone No. +49 89 2399 2600 	

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP00/05800

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-18 as originally filed

**Claims, No.:**

1-25 as originally filed

**Drawings, sheets:**

1/6-6/6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP00/05800

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-25
	No:	Claims	

Inventive step (IS)	Yes:	Claims	1-19
	No:	Claims	20-25

Industrial applicability (IA)	Yes:	Claims	1-25
	No:	Claims	

**2. Citations and explanations**  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. The available prior art does not disclose or suggest a charged particle device comprising a particle mirror on the optical axis or a particle mirror with both deflecting and drift regions. The subject-matter of claims 1, 14 and 19 is therefore new (Article 33(2) PCT) and inventive (Article 33(3) PCT).

2. Claims 2-13 and 15-18 are dependent on claims 1 and 14 respectively, and as dependent claims also meet the requirements of the PCT with respect to novelty and inventive step.

3. The subject-matter of claim 20 seems a mere juxtaposition of well known devices that does not seem to comprise any essential technical features in view of the problem posed on page 3 of the present application. A similar argument can be applied to the subject-matter of claims 21-24. Claim 25 is related to a merely optional feature. Thus, the subject-matter of claims 20-25 lacks an inventive step (see PCT Guidelines IV-8.8).

**Re Item VII**

**Certain defects in the international application**

The independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (US patent 5422486 cited in the description and the search report) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

**Re Item VIII**

**Certain observations on the international application**

1. Lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is

sought, and places an undue burden on others seeking to establish the extent of the protection. Hence, the requirements of Article 6 PCT are not met.

2. Independent claims 1 and 14 are not clear.

2.1. The presence of the three step deflection unit (12) defined in dependent claims 4 and 5 is necessary for the functioning of the charged particle device claimed in claim 1; without these deflecting devices, the drift and deflection regions in the mirror would be superfluous and would not perform their functions, their presence in claim 1 then misleading the reader.

2.2. In regard to claim 14, the particle mirror there defined is suitable for being used in the particle device defined in claim 1 but not in all particle devices, it is therefore necessary to extend the wording of the claim to 'for use in a charged particle device as defined in claim 1' (see PCT Guidelines III-4.8).

3. The vague and imprecise statements in the description on page 3, lines 6-7 and page 18, lines 1-5, imply that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them (see also the PCT Guidelines, III-4.3a).